U.S. Department of Energy

CAIS
Requirements Document
for
Inspection Unit Snapshots

Version 1.1

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Title Page

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Change Control Page

The change control page is used to record information about the changes (i.e., additions, modifications, deletions) that have been made to this document.

Revision Date	Section & Title	Page Numbers	Summary Of Changes	Author
11/02/2010			Updated per Ruth Ann's suggestions and feedback from the October 20th, 2010 CA Group Meeting.	Ken Rowe

Contents

1   Introduction

This requirements document addresses the need that CAIS have to refer to Inspection Unit (IU) information from previous time periods to support audits and data validation efforts.

1.1 Background

CAIS has an annual reporting requirement.   With the increased scruntiny of Deferred Maintenance (DM) data as well as data validation activities, the interest in the creation of a comprehesive historical record of IU and DM data has increased.

1.2 Scope

The proposed solution will consist of the creation of additional data tables, new screens, updates to existing screens and the creation of new reports to capture and report on the required data.

1.3 Definitions

Please see the Facility Management Terminology glossary on the CAS website.

1.4 References

CAIS Web User Guide.

2   General Description

CAIS is a software application which is used to capture deferred maintenance costs for DOE real property assets.

2.1 System Overview

CAIS is a software application used by DOE sites to report deferred maintenance (DM) to FIMS. CAIS is written in Java and presented using HTML and JavaScript. See the CAIS Functional Architecture v2 document for additional details.

2.2 System Objectives

The objectives of this enhancement are as follows:

1. Store all Inspection Unit data for all Inspection Units in the CAIS database. The cais_site_inspected_ius table currently has 66 fields.

2. Store all of the IU deficiency data associated with the IU. The name of the table which stores the deficiencies is cais_site_svy_defs.

3. Include the date the snapshot was taken with each record in the snapshot.

4. Create a screen where a site may create a snapshot of their IU/Deficiency Data on an as-needed basis.

5. The IU data will be saved at the following times:

    - September 30th by CAIS staff
    - When the individual site chooses to create a snapshot.

6. Display the data from previous snapshots on a list under a new tab to be added to the IU Detail screen.

7. Display the data from each previous snapshot the same way that the IU Detail data is displayed.

8. On the detail screen for the snapshot, have previous and next buttons when applicable to display earlier and later snapshots in relationship to the snapshot record currently being viewed.

9. Create a report that compares the costs by asset for the current data and a specified snapshot.

10. Create a report that displays the data for a selected snapshot.

11. Create a report that displays the data for multiple snapshots.

12. We may need to use Oracle materialized views to speed up the reporting of these snapshots.

2.3 System Users

The system users consist of the sites which currently use the CAIS software application.

2.4 Dependencies, Constraints, and Assumptions

None.

2.5 Alternatives

One alternative would be to have sites save their own snapshots using Excel or MS Access.

3 Manage Requirements

After internally reviewing this document, we reviewed it at the CA Group meeting in Las Vegas on October 20, 2010. Additional requirements were identified and added to this document during this review.

3.1 Requirements Measurements

Prior to coding, a Function Point count will be conducted.

3.2 Obtaining an Understanding of and Commitment to the Requirements

- Review of this requirements document by the support team ensures an understanding of the requirements.
- We will also distribute this document to the community for comment.
- When we distribute the requirements for comment, we will give the Users a two week timeframe to accept them or comment on them.
- Team agreement on moving forward with the requirements which are documented in peer review records demonstrate commitment to the requirements.

3.3 Manage Requirements Changes

- This document will serve as a source of managing the requirements because we will update it and store earlier versions of it.

3.4 Maintain Bidirectional Traceability of Requirements

- We use a Traceability Matrix database, which records all enhancements, new and modified software programs and Oracle DDL files which apply to this module.

3.5 Identify Inconsistencies between Project Work and Requirements

- The execution of the test cases document prepared by the quality assurance staff will identify any inconsistencies between the implementation and this requirements document.
- A peer review of the User Guide will also ensure that the Guide matches the test results.

4 Business Processes

The business processes will not be changed. New historical information will be made avaialable.

5 Determine, Document and Track Requirements

This will be done within this requirements document as well as within the Traceability Matrix database.

5.1 System Functional Requirements

5.1.1 Customer Goals
The customer goals are described in section 2.2.

5.1.2 Business and System Functional Requirements
See section 2.2.

5.2 Computer Security Requirements

Not applicable for this enhancement.

5.3 Data Requirements

Two new Oracle tables will be created where the data for the snapshot will be stored. The data used to populate these new tables will come from the data currently stored in CAIS.

5.4 Operational Requirements

Not applicable.

5.5 System Interface Requirements

Not applicable.

5.6 User Interface Requirements

A menu choice and screen will be added where users can create a snapshot.

5.7 Development Implementation Requirements

There are no specific implementation requirements outside the standard CAIS lifecycle development processes telecommunications requirements.

5.8 Network Requirements

Not applicable.

5.9 Other Requirements

Not applicable.

5.10 Establish Requirements Baseline

This document is the requirements baseline. Previous versions will be stored.

6 Operational Scenarios

These will be included in the CAIS User Guide.

7 Assess and Mitigate Risk

Every software change creates a degree of risk. This particular enhancement has a number of different risks.

7.1 Risk Assessment and Mitigation

This enhancement has the following risks:

1. The basic functioning of the IU screen could be compromised. We will mitigate this risk by extensively testing the IU screen.

2. The dollar values could be calculated incorrectly and the data could be corrupted. We will extensively test this new feature to guard against this risk.

8 Reviews

There will be two levels of reviews. First, our team will conduct an internal review. Next, there will be a customer review. When this enhancement is completed and the release is deployed, a milestone review will be conducted to determine any lessons learned.

9 Records

User feedback will be collected at the bottom of this document. This document is stored in the CAS Repository in the location mentioned in the Software Development Plan. Specifically, it is located in the following directory: O:\F&I\CASCOSTWorks Repository\Documentation\Requirements.

10 Approvals

At the expiration of the two week review period, the enhancement will be approved. We will address any comments that are made by revising this document and re-distributing the final version. If there are still outstanding concerns from the field, we will postpone coding the enhancement until the field is happy with the requirements.

10.1 Management Approval

CAIS Project Manager Approval

10.2 Client Approval

The Federal Subtask Manager

10.3 Site Feedback

1. See requirements 2, 4 and 5.